scenario, or a close variation of it, has actually occurred in North Carolina, and each can be expected to recur.

1. Private firm buys old intake and consumes or exports water, even while downstream industries and water systems are running dry.
2. Private firm pumps groundwater and uses or exports it, even while adjoining farmer's wells dry up.
3. City is unaware of its precarious water supply and leaky pipes until it fails to deliver on promises to new development.
4. Strong population and commercial growth in the headwaters leaves a water system no or few options for additional supply.

Each scenario contains a brief discussion of the laws, policies, and institutions in the present system of water allocation that do and do not apply. At the end of the recommendations section of this report is a discussion of how the recommendations in this report would address each scenario.

1. Private firm buys old intake and consumes or exports water, even while downstream industries or water systems are running dry.

Imagine a major industrial facility in North Carolina that depends on a water intake from a river for its production. It could be producing paper, pharmaceuticals, food, or many other types of products; it could even be a power-generating plant that needs water for cooling. What if another company later located upstream by buying a facility that already has a water intake structure in the river, and the upstream company began to consume large quantities of water—either for its own production processes or to export bulk water to other locations in or outside the state? In low-flow periods, such as North Carolina experienced from 1998–2002 and 2007–2008, suppose the upstream company's withdrawal of water to export out of state meant that the major downstream facility had to stop operations because it could not get an adequate, assured supply of water? How do current North Carolina law and policy respond to this problem?

Under present law, there is little or nothing that state or local government could do. Assuming the upstream company has properly registered its large withdrawal, there is no executive-branch regulation of the amounts of water it can withdraw, even if its withdrawal causes substantial harm to prior, major downstream water users. There is no proactive review of whether the upstream user's plans are likely to cause a problem for downstream users, and there is no forum other than court to deal with the problem after it has occurred. The current law leaves it to the downstream user to litigate whether the upstream withdrawer's actions were unreasonable or otherwise violated the downstream industry's riparian rights—after the damage has been done. The outcome of this litigation would be highly fact-specific, uncertain, and likely take a long time to resolve. That outcome is unacceptable to most major water-using industries, and certainly to power plants.

Note that the downstream user could even be a community water system supplying water to tens of thousands of people; unless that system had rights under North Carolina's Stored Water Act (which is unlikely), it would be in just as bad and probably a worse position than the major industry to protect its water supply from a later withdrawer, even a withdrawer who was shipping bulk water to other places. Note also that the upstream user could be an irrigator that, instead of using an existing